

**METHOD AND APPARATUS FOR IDENTIFYING A POSITION OF A
PREDETERMINED OBJECT IN FREE SPACE USING A VIDEO IMAGE**

ABSTRACT

5 A method and apparatus is disclosed for identifying a position of an
object in free space using a video image wherein the object is comprised of at least
three equidistantly spaced, co-linear beads. The video image is captured on a view
plane of a video camera system and represented on a frame memory thereof. Relative
positions of the beads on the frame memory are determined and corresponding
10 coordinate positions of the beads in the free space are calculated based upon the
determined relative spacings and known camera system geometries. The object may
also include an alignment indicator so that the pointing direction of the object can be
determined.

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